

S/N 10/685,770

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Kampf et al.	Examiner:	Essama Omgba
Serial No.:	10/685,770	Group Art Unit:	3726
Filed:	October 14, 2003	Docket No.:	02316.1220USD1
Customer No.:	23552	Confirmation No.:	6337
Title:	Cable Trough Method with Separate Side Elements		

APPELLANTS' BRIEF ON APPEAL

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This brief supports the Appeal filed May 11, 2011, from the rejection of claims 1-3, 5, and 6 as set forth in the Office Action mailed February 16, 2011. Please consider and enter the following remarks.

Remarks are included with this paper.

A Claims Appendix is included with this paper.

An Evidence Appendix is included with this paper.

A Related Proceeding Appendix is included with this paper.

Remarks

This brief is submitted in support of Applicants' Appeal of the rejection of claims 1-3, 5, and 6 in the Office Action mailed February 16, 2011. In this Action, it is noted that a new appeal can be initiated and that the previously-paid notice of appeal and appeal brief fees can be applied. Please consider and enter the following remarks in response to the Action.

I. Real Party in Interest

An Assignment recorded on December 7, 2000 at reel 011353, frame 0531, lists ADC Telecommunications, Inc. as the assignee of U.S. Patent Application Serial No. 09/669,279. The present application is a divisional of the '279 application. ADC Telecommunications, Inc. is the current owner and real party of interest for this Appeal.

S/N 10/685,770

II. Related Appeals and Interferences

There are no related appeals or interferences.

III. Status of Claims

The status of the claims is as follows:

- claims allowed: none;
- claims objected to: none;
- claims rejected: 1-3, 5, and 6;
- claims canceled: 4; and
- claims withdrawn from consideration: none.

The claims being appealed are: claims 1-3, 5, and 6.

S/N 10/685,770

IV. Status of Amendments

All amendments filed during the prosecution of the present application have been entered.

V. Summary of Claimed Subject Matter

The claims of the present application are directed to methods of assembling a cable routing system. In examples described in the application, the cable routing systems include a planar base element with linear mating edges. A plurality of different side elements can be mounted to the base element along the linear mating edges to form the cable routing systems. Such side elements can include upstanding wall portions extending to a vertical height above the planar top surface of the base element, and side exits extending transversely relative to the linear mating edges and generally parallel to the planar top surface.

Such methods of assembly of cable routing systems can be advantageous for several reasons. For example, the use of a base element with linear mating edges allows for greater flexibility during installation. The base element can be cut to a desired length, and side elements can be mounted at desired locations along the linear mating edges of the base element, thereby allowing for assembly on site and reducing a need for inventorying a plurality of different types and lengths of troughs, fittings, couplers, etc. Application, page 7, lines 25-27; page 8, lines 24-30. Also, after installation, the cable routing system can be easily modified by removing one or more of the side elements and replacing the side elements with other side elements. Page 3, lines 3-5; page 7, line 27 – page 8, line 2. For example, if an exit is needed after installation, an upstanding wall portion can be removed by unsnapping it from the base element, and a side exit can be snapped into place at the desired location.

A table listing example support for each claim limitation is provided below.

Claim Limitation	Example Support in Specification
1. (Previously Presented) A method of assembling a cable routing system comprising the steps of:	P. 4, ll. 24-25; Figs. 1-22

Claim Limitation	Example Support in Specification
<p>providing a base element with a planar top surface, first and second ends, and opposite sides, the top surface having a linear mating edge on the opposite sides of the planar top surface, each linear mating edge having a continuous cross-section along the length of each linear mating edge, and each linear mating edge defining a first mounting structure, and the planar top surface being planar along an entirety of the base element extending between the first end and the second end, including between a first of the linear mating edges to a second of the linear mating edges, and between the first mounting structure of the first linear mating edge to the first mounting structure of the second mating edge;</p>	<p>P. 5, l. 19 – p. 6, l. 2; Figs. 7-11</p>
<p>mounting a plurality of side elements to the base element along the linear mating edges by attaching second mounting structures formed on the side elements with the first mounting structure of the respective linear mating edge, the first and second mounting structures being connected to couple the side elements to the base element, a first plurality of the side elements having an upstanding wall portion extending to a vertical height above the planar top surface of the base element, a second plurality of the side elements defining side exits extending transversely relative to the linear mating edges, and generally parallel to the planar top surface; and</p>	<p>P. 6, l. 16 – p. 7, l. 13; Figs. 7-11</p>

Claim Limitation	Example Support in Specification
mounting the base element at a vertical height above a telecommunications bay.	P. 6, ll. 12-15; Figs. 7-11
2. (Original) The method of claim 1, wherein one of the side elements of the second plurality of side elements includes a downspout portion to define a cable pathway extending from the planar top surface to a location below the planar top surface.	P. 7, ll. 14-24; Figs. 13 and 14
3. (Previously Presented) A method of assembling a cable routing system comprising the steps of:	P. 4, ll. 24-25; Figs. 1-22
providing a base element with a planar top surface, an opposite facing bottom surface, the base element including first and second ends, and first and second sides, the ends and the sides forming a perimeter of the base element, each of the sides having a continuous cross-section along the length of each side, the planar top surface being planar along an entirety of the base element extending to the perimeter, and each of the sides defining a first mounting structure positioned within the perimeter;	P. 5, l. 19 – p. 6, l. 2; Figs. 7-11
selecting a plurality of mating elements from a group consisting of: mating base elements, upstanding wall elements, and side exit elements including at least one horizontal side exit and at least one downspout;	P. 6, l. 16 – p. 7, l. 24; Figs. 7-14

Claim Limitation	Example Support in Specification
mounting a second mounting structure of the selected mating elements to the base element along the sides to form the cable routing system, wherein the first or second mounting structures fits within the other of the first or second mounting structures to couple the selected mating elements to the base element, and wherein the mating elements form a continuous surface along the sides of the base element; and	P. 8, ll. 3-7; Fig. 15
mounting at least one horizontal side exit and at least one downspout to the base element.	P. 6, l. 16 – p. 7, l. 24; Figs. 7-14
5. (Previously Presented) A method of assembling a cable routing system comprising the steps of:	P. 4, ll. 24-25; Figs. 1-22
providing a plurality of rectangular base elements, each base element having a planar top surface, two opposite sides, and two opposite ends, the planar top surface being planar along an entirety of the base element extending between the two opposite sides and the two opposite ends, and the base elements having a continuous cross-section in a direction parallel to the opposite sides;	P. 5, l. 19 – p. 6, l. 2; Figs. 7-11
mounting the base elements together to form a base having a planar top surface extending to outermost edges defined by one or more of the opposite sides and opposite ends of the base elements;	P. 5, ll. 24-28; Figs. 1-2

Claim Limitation	Example Support in Specification
<p>mounting a plurality of side elements to the base along the opposite sides of the base elements by connecting a first mounting structure defined by the side of the base to a second mounting structure defined by the side elements, wherein the first or second mounting structures fits within the other of the first or second mounting structures to couple the side elements to the base, and wherein at least first and second side elements of the plurality of side elements include upstanding wall portions extending to a vertical height above the planar top surface of the base elements, and wherein a third side element of the plurality of side elements includes a side exit defining portion for exiting parallel to the planar top surface of the base.</p>	<p>P. 6, l. 16 – p. 7, l. 13; Figs. 7-11</p>
<p>6. (Original) The method of claim 5, wherein the third side element further defines a downspout portion extending from the side exit defining portion extending below the planar top surface of the base.</p>	<p>P. 7, ll. 14-24; Figs. 13 and 14</p>

VI. Grounds of Rejection to be Reviewed on Appeal

Claims 1-3, 5, and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bernard (U.S. Patent No. 6,450,458) in view of Miranda (U.S. Patent No. 6,107,575).

VII. Argument

This is in response to the Office Action mailed February 16, 2011. Claims 1-3, 5, and 6 are pending. Reconsideration and allowance are requested for at least the following reasons.

A. Rejection

In the Office Action mailed February 16, 2011, claims 1-3, 5, and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bernard (U.S. Patent No. 6,450,458) in view of Miranda (U.S. Patent No. 6,107,575). Applicants respectfully traverse the rejection. Reconsideration is requested for at least the following reasons.

B. Statutes, Laws, and Rules

To render obvious, one or more references must teach every claim limitation. 35 U.S.C. § 103(a); MPEP 2141. References cannot be combined when one reference teaches away from the suggested combination. See KSR Int'l v. Teleflex Inc., 127 S. Ct. 1727, 1740 (citing United States v. Adams, 383 U.S. 39, 50-51, 86 S. Ct. 708 (1966)); MPEP 2143.01 and 2145(X)(D)(2).

C. Analysis

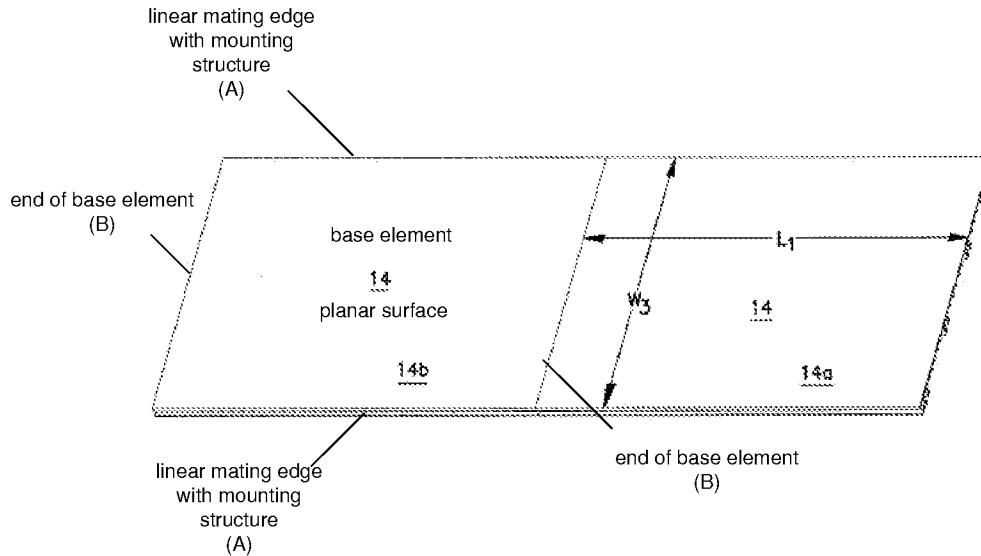
i. Claims 1 and 2

Claim 1 is directed to a method of assembling a cable routing system. Claim 1 recites, in part, that the planar top surface is planar along an entirety of the base element extending between the first end and the second end, including between a first of the linear mating edges to a second of the linear mating edges, and between the first mounting structure of the first linear mating edge to the first mounting structure of the second mating edge.

As noted in the Summary section, such a method is advantageous for various reasons. For example, such a method of assembly provides flexibility as the cable routing system is assembled, as well as after assembly when modifications are required.

a. The Purported Combination Lacks a Base with Planar Surface

One example of this limitation is illustrated in Figure 2 of the application, reprinted below.



(Annotations added). As shown in Figure 2, each base element 14 includes linear mating edges “A” and ends “B” with mounting structures. Each base element 14 is planar along an entirety of the planar top surface of the base element 14 between the linear mating edges A and the ends B, including between the mounting structures.

The Action states the following regarding these limitations of claim 1:

[T]he examiner submits that incorporating the mounting structures taught by Miranda in the cable routing system of Bernard would result in a planar top surface that is planar along an entirety of the base element extending between the first end and the second end, including between a first of the linear mating edges to a second of the linear mating edges, and between the first mounting structure of the first linear mating edge to the first mounting structure of the second linear mating edge as base element 220 of Bernard would be provided with the mounting structures illustrated in figure 2 of Miranda (see figure 1 of Bernard and figure 2 of Miranda).

Action, p. 5. Presumably, this language indicates that the base element 220 of Bernard and the mounting structures of Figure 2 of Miranda are planar. However, neither discloses a planar surface as recited in claim 1.

In Bernard, the duct section 200 including the base 220 (which is integrally connected to the sides 210) is U-shaped and is clearly not planar. There is no suggestion how the duct section 200 disclosed by Bernard could be modified to form a planar surface.

The Action further states that the system of Bernard “is formed of a plurality of base and side elements connected to each other.” Action, p. 4. This is simply not true, at least with respect

to the duct section 200. As noted, the duct section 200, including the base 220 and sides 210, is formed of a single, integrally molded piece. See, e.g., Figs. 1 and 4. Bernard fails to disclose otherwise.

In Miranda, as noted more fully below, the “locking structure” of Miranda is elevated with respect to the top surface of the element 2, as shown in Figure 1 (reprinted below). Therefore, Miranda fails to disclose a planar surface.

b. The References Teach Away from the Purported Combination

Bernard teaches away from the purported combination with Miranda because Bernard states the following:

The coupler 100 has an inner wall consisting of two side walls 110 and a bottom wall 120, which are preferably integral and continuous.

Bernard, col. 3, ll. 5-7 (underling added). Bernard therefore requires couplers and troughs with integral walls and teaches away from forming a base element and a plurality of side elements mounted thereto.

The Action states that this section of Bernard only shows that “Bernard favors an integrally formed routing system over one that is formed from separate elements for example.” Action, p. 5. This preference illustrates that Bernard teaches away from the claimed combination. Bernard “favors” an integral duct and, in doing so, teaches away from a base element with separate side elements.

c. The References Cannot be Combined as Suggested

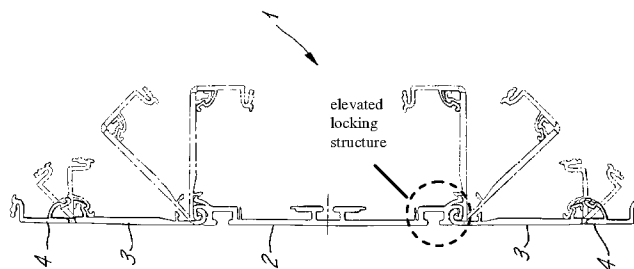
Miranda discloses a linear channel section with pivotable wall elements. In contrast, the elements of Figures 10 and 12 of Bernard that are identified in the Action are fittings. Such fittings are typically attached to the ends of linear sections. See, for example, Fig. 1 of U.S. Patent No. 6,739,795, which shows a linear trough 12 coupled to a fitting 18 by a coupler 14.

There is no suggestion provided as to how one would take the fittings disclosed by Bernard and incorporate the linear sections disclosed by Miranda to arrive at the claimed inventions. For example, the Action fails to identify how the fittings disclosed in Figures 10 and

12 of Bernard could be coupled to the longitudinal sides of the element 2 of Miranda. Such a combination, as suggested in the Action, could not be made.

The Action states that it “does not suggest coupling the fittings of Bernard to the side elements of Miranda but rather modifying the integral routing system of Bernard into one formed from separate elements as taught by Miranda.” Action, p. 6. This statement fails to suggest how such a modification could be accomplished. If Bernard could be modified to include separate elements (the propriety of which is not conceded), those separate elements would need to be combined in some manner to form the routing system. This combination is not taught by Bernard, since the duct sections are integral. Miranda is the only reference that discloses the combination of elements using a locking structure, and there is no suggestion how that locking structure could be combined with Bernard.

Further, the “locking structure” of Miranda is elevated with respect to the top surface of the element 2, as shown in Figure 1 of Miranda, reprinted below (annotations added).



The Action fails to suggest how one would modify the locking structures disclosed by Miranda to create a planar surface. For example, there is no suggestion regarding how the elevated locking structure disclosed by Miranda could be modified or removed to form a planar surface.

The Action also states that the “locking structures” disclosed in the present application are located below the top surface of the base element. This characterization is respectfully traversed. The mounting structures 54 shown in Figure 11 are defined by the side edges 52 of the base element 14. As such, the base element 14 is planar along its entirety, including that of the side edges 52 forming the mounting structures 54.

d. There is No Suggestion to Make the Purported Combination

In addition, there is no suggestion as to how or why one skilled in the art would be motivated to modify the fittings disclosed by Bernard based on the channels disclosed by Miranda to arrive at the claimed methods. Claim 1 does not simply recite methods that include breaking a cable routing system into various elements, but instead recite specific structures for each of the elements that allow the elements to be assembled according to the steps of the claimed methods.

Neither Bernard nor Miranda, alone or in combination, discloses or suggests an assembly method for cable routing systems as recited in claim 1. Further, even if the fittings disclosed by Bernard could be broken into separate elements, there are literally thousands of different ways in which the elements could be formed. It is therefore respectfully suggested that it would not have been obvious to try because there are not simply a finite number of identified, predictable solutions.

Reconsideration and allowance of claim 1, as well as claim 2 that depends therefrom, are therefore requested.

ii. Claim 3

Claim 3 now recites the planar top surface being planar along an entirety of the base element extending to the perimeter, each of the sides defining a first mounting structure positioned within the perimeter, and each of the sides having a continuous cross-section along the length of each side. Claim 3 therefore requires that the locking structures fall within the perimeter, which has a planar top surface along its entirety. For at least reasons similar to those noted above, neither Bernard nor Miranda, alone or in combination, discloses or suggests such a method.

Claim 3 also recites mounting at least one horizontal side exit and at least one downspout to the base element. The Action fails to disclose or suggest how or why one would have modified the locking structures of Miranda to accommodate a downspout. For example, because of the elevated nature of the locking structures in Miranda, any fiber optic cables exiting a trough would be required to bend upwards to move over the locking structure of Miranda, and then bend

downwards to exit through the downspout. Such a configuration would result in multiple bends in the cables, which is undesirable.

The Action states that “downspouts could be mounted at the end of a cable routing section or a section of a side wall could be cut out to accommodate a downspout.” Action, p. 7. If the former is true, the downspout would interrupt the routing system, as the mounting of the spout to an end would not allow another structure (e.g., another duct or other element) to continue the routing system. The latter simply finds no support in either Miranda or Bernard – neither discloses nor suggests cutting any structure to accommodate a downspout.

Reconsideration and allowance of claim 3 are requested.

iii. Claims 5 and 6

Claim 5 now recites mounting the base elements together to form a base having a planar top surface extending to outermost edges defined by one or more of the opposite sides and opposite ends of the base elements, and the base elements having a continuous cross-section in a direction parallel to the opposite sides. Claim 5 is therefore allowable for at least reasons similar to those noted above.

Reconsideration of claim 5, as well as claim 6 that depends therefrom, is requested.

Summary

It is earnestly requested that the Examiner's rejection of the above-noted claims be reversed. Favorable reconsideration in the form of a Notice of Allowance is respectfully requested. Please contact the undersigned attorney with any questions regarding this application. Please charge any additional fees or credit overpayment to Merchant & Gould Deposit Account No. 13-2725.

Respectfully submitted,
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Date: May 11, 2011

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VIII. Claims Appendix

1. (Previously Presented) A method of assembling a cable routing system comprising the steps of:

providing a base element with a planar top surface, first and second ends, and opposite sides, the top surface having a linear mating edge on the opposite sides of the planar top surface, each linear mating edge having a continuous cross-section along the length of each linear mating edge, and each linear mating edge defining a first mounting structure, and the planar top surface being planar along an entirety of the base element extending between the first end and the second end, including between a first of the linear mating edges to a second of the linear mating edges, and between the first mounting structure of the first linear mating edge to the first mounting structure of the second mating edge;

mounting a plurality of side elements to the base element along the linear mating edges by attaching second mounting structures formed on the side elements with the first mounting structure of the respective linear mating edge, the first and second mounting structures being connected to couple the side elements to the base element, a first plurality of the side elements having an upstanding wall portion extending to a vertical height above the planar top surface of the base element, a second plurality of the side elements defining side exits extending transversely relative to the linear mating edges, and generally parallel to the planar top surface; and

mounting the base element at a vertical height above a telecommunications bay.

2. (Original) The method of claim 1, wherein one of the side elements of the second plurality of side elements includes a downspout portion to define a cable pathway extending from the planar top surface to a location below the planar top surface.

3. (Previously Presented) A method of assembling a cable routing system comprising the steps of:

providing a base element with a planar top surface, an opposite facing bottom surface, the base element including first and second ends, and first and second sides, the ends and the sides forming a perimeter of the base element, each of the sides having a continuous cross-section

along the length of each side, the planar top surface being planar along an entirety of the base element extending to the perimeter, and each of the sides defining a first mounting structure positioned within the perimeter;

selecting a plurality of mating elements from a group consisting of: mating base elements, upstanding wall elements, and side exit elements including at least one horizontal side exit and at least one downspout;

mounting a second mounting structure of the selected mating elements to the base element along the sides to form the cable routing system, wherein the first or second mounting structures fits within the other of the first or second mounting structures to couple the selected mating elements to the base element, and wherein the mating elements form a continuous surface along the sides of the base element; and

mounting at least one horizontal side exit and at least one downspout to the base element.

4. (Canceled)

5. (Previously Presented) A method of assembling a cable routing system comprising the steps of:

providing a plurality of rectangular base elements, each base element having a planar top surface, two opposite sides, and two opposite ends, the planar top surface being planar along an entirety of the base element extending between the two opposite sides and the two opposite ends, and the base elements having a continuous cross-section in a direction parallel to the opposite sides;

mounting the base elements together to form a base having a planar top surface extending to outermost edges defined by one or more of the opposite sides and opposite ends of the base elements;

mounting a plurality of side elements to the base along the opposite sides of the base elements by connecting a first mounting structure defined by the side of the base to a second mounting structure defined by the side elements, wherein the first or second mounting structures fits within the other of the first or second mounting structures to couple the side elements to the base, and wherein at least first and second side elements of the plurality of side elements include upstanding wall portions extending to a vertical height above the planar top surface of the base

elements, and wherein a third side element of the plurality of side elements includes a side exit defining portion for exiting parallel to the planar top surface of the base.

6. (Original) The method of claim 5, wherein the third side element further defines a downspout portion extending from the side exit defining portion extending below the planar top surface of the base.

IX. Evidence Appendix

A. Office Actions and Amendments/Responses

1. Non-final Office Action mailed September 3, 2004
2. Response filed March 3, 2005
3. Non-final Office Action mailed May 17, 2005
4. Response filed November 17, 2005
5. Non-final Office Action mailed February 14, 2006
6. Response filed June 12, 2006
7. Non-final Office Action mailed August 24, 2006
8. Response filed February 26, 2007
9. Final Office Action mailed May 15, 2007
10. Response filed September 17, 2007
11. Non-final Office Action mailed November 28, 2007
12. Response filed May 27, 2008
13. Final Office Action mailed September 3, 2008
14. Response filed December 3, 2008
15. Advisory Office Action mailed December 18, 2008
16. Notice of Appeal filed February 18, 2009
17. Response filed June 5, 2009
18. Non-final Office Action mailed August 17, 2009
19. Response filed November 17, 2009
20. Final Office Action mailed February 18, 2010
21. Notice of Appeal filed May 18, 2010
22. Appeal Brief filed August 17, 2010
23. Non-final Office Action mailed February 16, 2011

B. References Relied Upon by the Examiner

1. Barybin et al. (SU 1272387)
2. Bernard (U.S. Patent No. 6,450,458)
3. Cheng (U.S. Patent No. 5,813,738)

4. Fox (U.S. Patent No. 7,034,227)
5. Henneberger et al. (U.S. Patent No. 5,067,678)
6. Klug (U.S. Patent No. 5,161,580)
7. Lee (U.S. Patent No. 5,893,617)
8. Merckle (U.S. Patent No. 3,351,699)
9. Miranda (U.S. Patent No. 6,107,575)
10. Mrotz III et al. (U.S. Patent No. 6,394,564)
11. Nicoli et al. (U.S. Patent No. 6,037,543)

S/N 10/685,770

X. Related Proceedings Appendix
None.